

FIG. 1

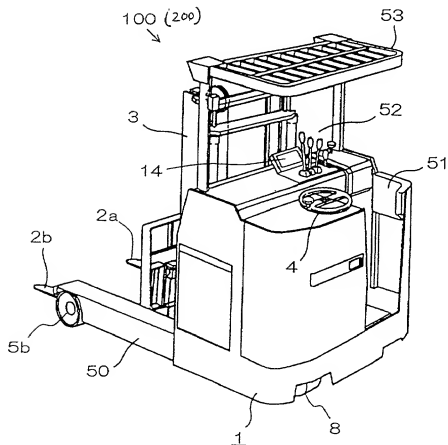
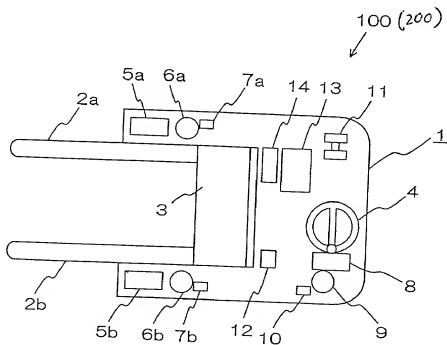
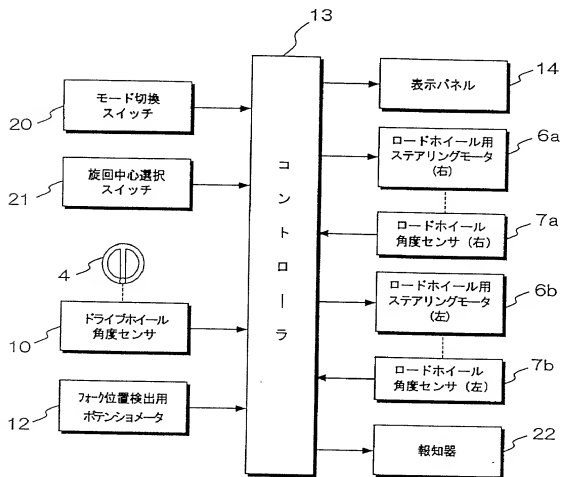


FIG. 2



03907551 142701

FIG. 3



6a: road wheel steering motor; 6b: road wheel steering motor; 7a: road wheel angle sensor (right); 7b: road wheel angle sensor (left); 10: driving wheel angle sensor; 12: fork arm position detecting potentiometer; 13: controller; 14: display panel; 20: mode switching switch; 21: center-of-turn selecting switch; 22: information device.

FIG. 4

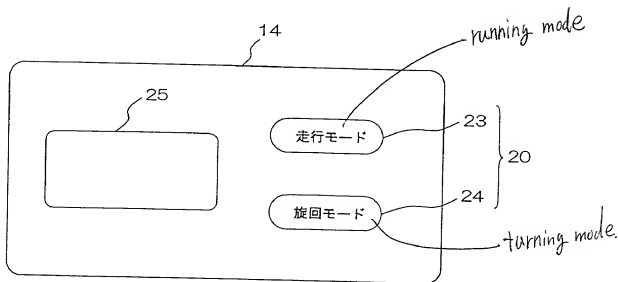


FIG. 5

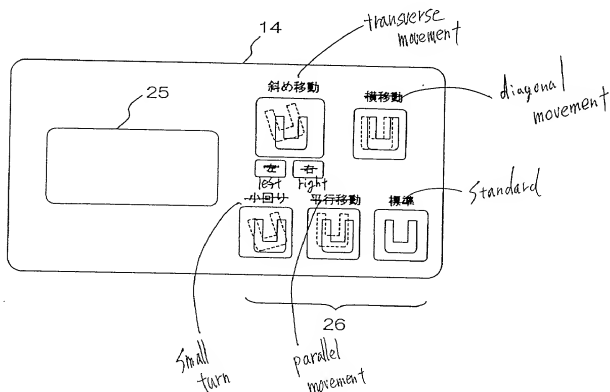


FIG. 6

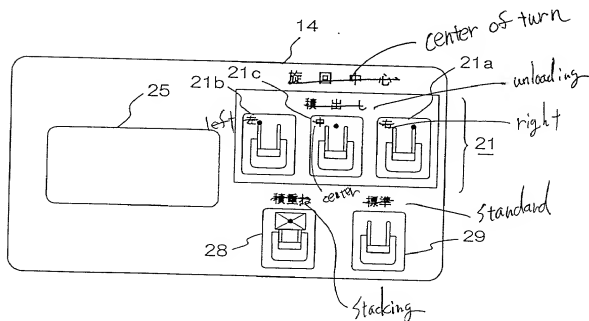


FIG. 7

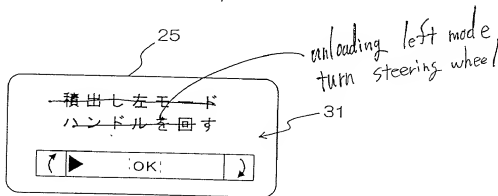
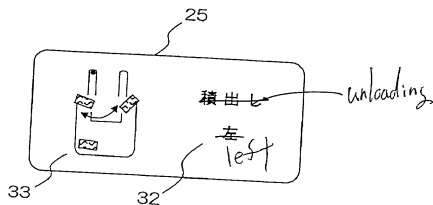
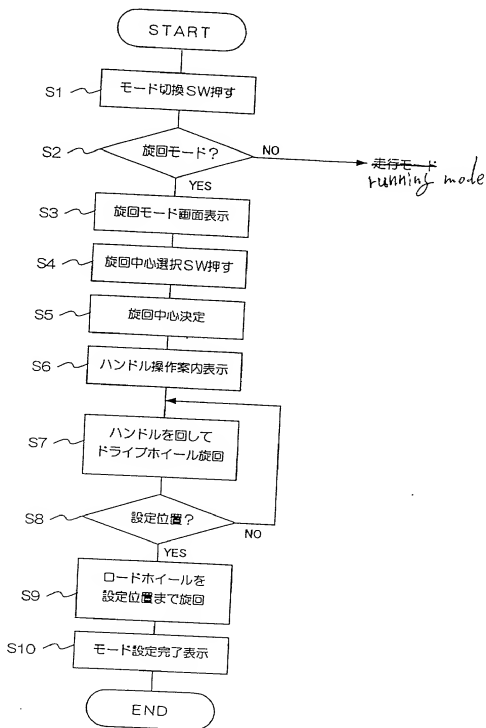


FIG. 8



0993544.12701

FIG. 9



S1. depress mode switching switch; S2. has turning mode been depressed?, center-of-turn selecting switch, S5. determine center of turn; S6. display steering wheel operation guide, S7. turn steering wheel to turn driving wheel; S8. has driving wheel turned to set position?; S9. turn road wheels to set positions, S10. display mode setting completion screen.

FIG. 10B

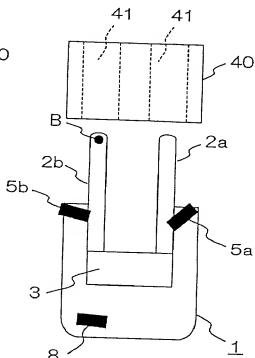


FIG. 10C

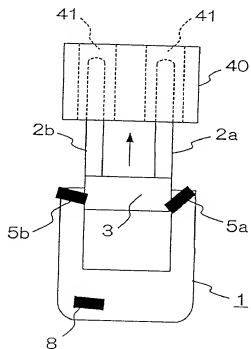




FIG. 11

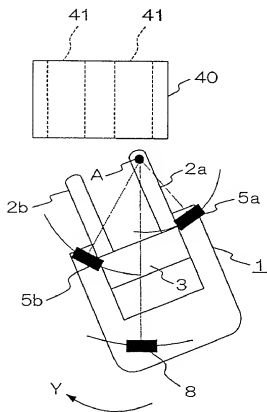




FIG. 13

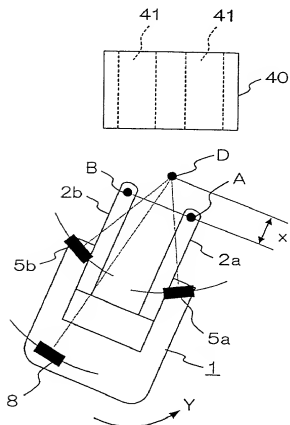
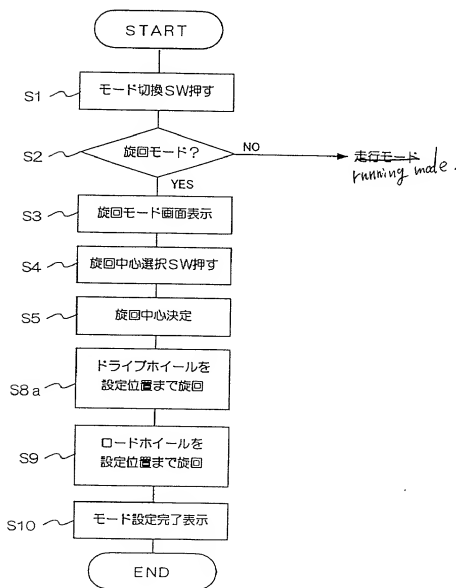
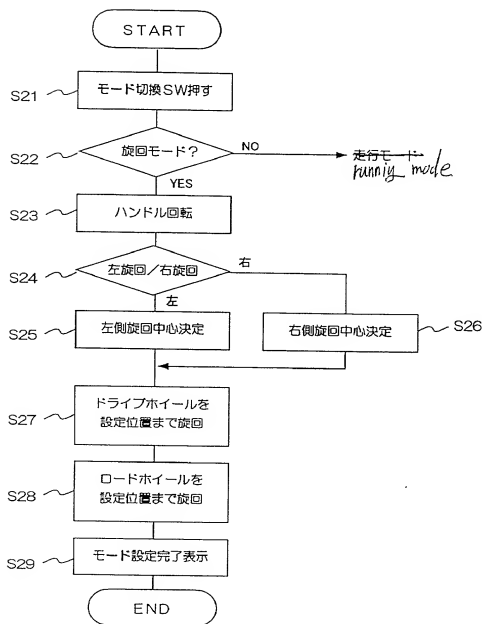


FIG. 14



S1: depress mode switching switch, S2: has turning mode been depressed?, S3: display turning mode screen, S4: depress center-of-turn selecting switch, S5: determine center of turn, S8a: turn driving wheel to set position, S9: turn road wheels to set positions, S10: display mode setting completion screen.

FIG. 15



S21: depress mode switching switch, S22: has tuning mode been depressed?, running mode, S23: turn steering wheel, S24: turn counterclockwise/turn clockwise, right, left, S27: turn driving wheel to set position, S28: turn road wheels to set positions, S29: display mode setting completion screen.

FIG. 16A

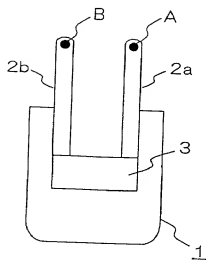


FIG. 16B

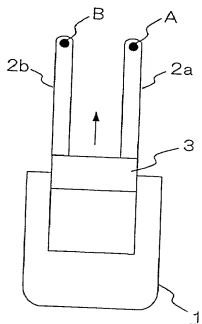
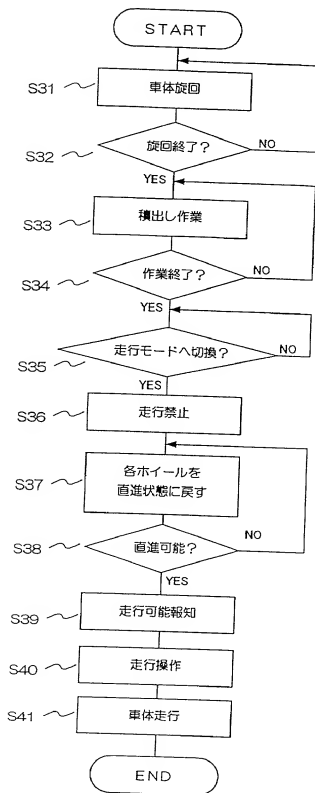
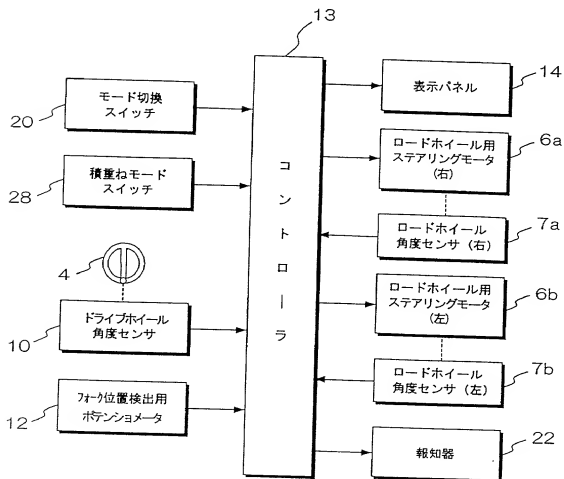


FIG. 17



S31: turn body; S32: has turn been completed; S33: unload cargo; S34: has unloading cargo been completed; S35: has operation mode been switched back to running mode; S36: prohibit running; S38: is straight running possible? S39: inform that running is ready; S40: perform running operation; S41: run body.

FIG. 18



6a: road wheel steering motor, 6b: road wheel steering motor, 7a: road wheel angle sensor (right), 7b: road wheel angle sensor (left), 10: driving wheel angle sensor, 12: fork arm position detecting potentiometer, 13: controller, 14: display panel, 20: mode switching switch, 22: information device, 28: stacking mode switch



FIG. 19

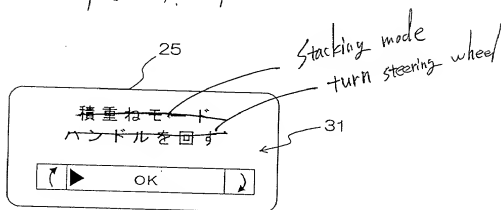


FIG. 20

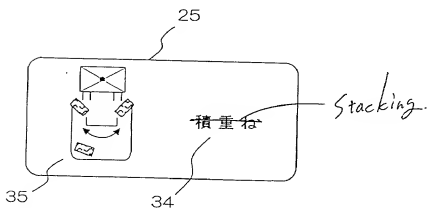
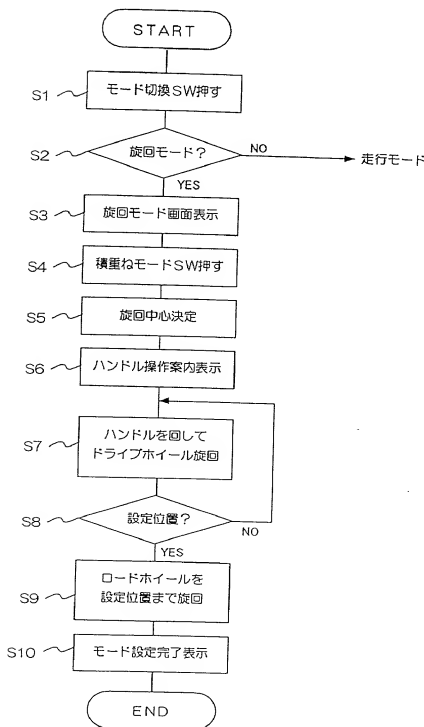
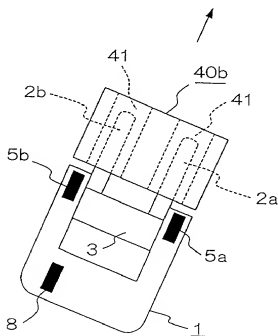
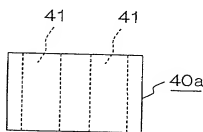


FIG. 21



S1: depress mode switching switch, S2: has turning mode been depressed?, S3: display turning mode screen; S4: depress stacking mode switch, S5: determine center of turn, S6: display steering wheel operation guide, S7: turn steering wheel to turn driving wheel, S8: has driving wheel turned to set position?, S9: turn road wheels to set positions, S10: display mode setting completion screen.

FIG. 22



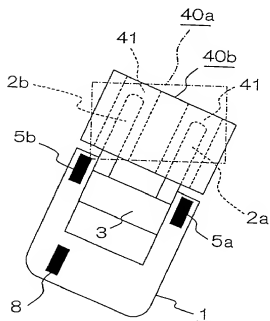


FIG. 24

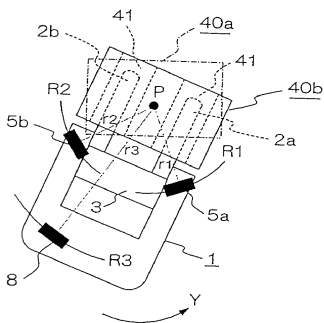


FIG. 25

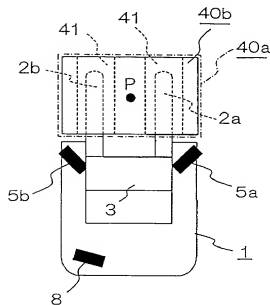
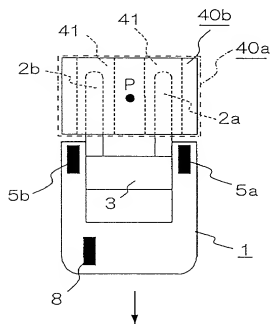


FIG. 26



Symbol	Definition	Symbol	Definition
$\mathbf{A}$	matrix	$\mathbf{B}$	matrix
$\mathbf{C}$	matrix	$\mathbf{D}$	matrix
$\mathbf{E}$	matrix	$\mathbf{F}$	matrix
$\mathbf{G}$	matrix	$\mathbf{H}$	matrix
$\mathbf{I}$	matrix	$\mathbf{J}$	matrix
$\mathbf{K}$	matrix	$\mathbf{L}$	matrix
$\mathbf{M}$	matrix	$\mathbf{N}$	matrix
$\mathbf{O}$	matrix	$\mathbf{P}$	matrix
$\mathbf{Q}$	matrix	$\mathbf{R}$	matrix
$\mathbf{S}$	matrix	$\mathbf{T}$	matrix
$\mathbf{U}$	matrix	$\mathbf{V}$	matrix
$\mathbf{W}$	matrix	$\mathbf{X}$	matrix
$\mathbf{Y}$	matrix	$\mathbf{Z}$	matrix
$\mathbf{a}$	vector	$\mathbf{b}$	vector
$\mathbf{c}$	vector	$\mathbf{d}$	vector
$\mathbf{e}$	vector	$\mathbf{f}$	vector
$\mathbf{g}$	vector	$\mathbf{h}$	vector
$\mathbf{i}$	vector	$\mathbf{j}$	vector
$\mathbf{k}$	vector	$\mathbf{l}$	vector
$\mathbf{m}$	vector	$\mathbf{n}$	vector
$\mathbf{o}$	vector	$\mathbf{p}$	vector
$\mathbf{q}$	vector	$\mathbf{r}$	vector
$\mathbf{s}$	vector	$\mathbf{t}$	vector
$\mathbf{u}$	vector	$\mathbf{v}$	vector
$\mathbf{w}$	vector	$\mathbf{x}$	vector
$\mathbf{y}$	vector	$\mathbf{z}$	vector
$\mathbf{A}^T$	transpose of $\mathbf{A}$	$\mathbf{B}^T$	transpose of $\mathbf{B}$
$\mathbf{C}^T$	transpose of $\mathbf{C}$	$\mathbf{D}^T$	transpose of $\mathbf{D}$
$\mathbf{E}^T$	transpose of $\mathbf{E}$	$\mathbf{F}^T$	transpose of $\mathbf{F}$
$\mathbf{G}^T$	transpose of $\mathbf{G}$	$\mathbf{H}^T$	transpose of $\mathbf{H}$
$\mathbf{I}^T$	transpose of $\mathbf{I}$	$\mathbf{J}^T$	transpose of $\mathbf{J}$
$\mathbf{K}^T$	transpose of $\mathbf{K}$	$\mathbf{L}^T$	transpose of $\mathbf{L}$
$\mathbf{M}^T$	transpose of $\mathbf{M}$	$\mathbf{N}^T$	transpose of $\mathbf{N}$
$\mathbf{O}^T$	transpose of $\mathbf{O}$	$\mathbf{P}^T$	transpose of $\mathbf{P}$
$\mathbf{Q}^T$	transpose of $\mathbf{Q}$	$\mathbf{R}^T$	transpose of $\mathbf{R}$
$\mathbf{S}^T$	transpose of $\mathbf{S}$	$\mathbf{T}^T$	transpose of $\mathbf{T}$
$\mathbf{U}^T$	transpose of $\mathbf{U}$	$\mathbf{V}^T$	transpose of $\mathbf{V}$
$\mathbf{W}^T$	transpose of $\mathbf{W}$	$\mathbf{X}^T$	transpose of $\mathbf{X}$
$\mathbf{Y}^T$	transpose of $\mathbf{Y}$	$\mathbf{Z}^T$	transpose of $\mathbf{Z}$
$\mathbf{a}^T$	transpose of $\mathbf{a}$	$\mathbf{b}^T$	transpose of $\mathbf{b}$
$\mathbf{c}^T$	transpose of $\mathbf{c}$	$\mathbf{d}^T$	transpose of $\mathbf{d}$
$\mathbf{e}^T$	transpose of $\mathbf{e}$	$\mathbf{f}^T$	transpose of $\mathbf{f}$
$\mathbf{g}^T$	transpose of $\mathbf{g}$	$\mathbf{h}^T$	transpose of $\mathbf{h}$
$\mathbf{i}^T$	transpose of $\mathbf{i}$	$\mathbf{j}^T$	transpose of $\mathbf{j}$
$\mathbf{k}^T$	transpose of $\mathbf{k}$	$\mathbf{l}^T$	transpose of $\mathbf{l}$
$\mathbf{m}^T$	transpose of $\mathbf{m}$	$\mathbf{n}^T$	transpose of $\mathbf{n}$
$\mathbf{o}^T$	transpose of $\mathbf{o}$	$\mathbf{p}^T$	transpose of $\mathbf{p}$
$\mathbf{q}^T$	transpose of $\mathbf{q}$	$\mathbf{r}^T$	transpose of $\mathbf{r}$
$\mathbf{s}^T$	transpose of $\mathbf{s}$	$\mathbf{t}^T$	transpose of $\mathbf{t}$
$\mathbf{u}^T$	transpose of $\mathbf{u}$	$\mathbf{v}^T$	transpose of $\mathbf{v}$
$\mathbf{w}^T$	transpose of $\mathbf{w}$	$\mathbf{x}^T$	transpose of $\mathbf{x}$
$\mathbf{y}^T$	transpose of $\mathbf{y}$	$\mathbf{z}^T$	transpose of $\mathbf{z}$
$\mathbf{A}^{-1}$	inverse of $\mathbf{A}$	$\mathbf{B}^{-1}$	inverse of $\mathbf{B}$
$\mathbf{C}^{-1}$	inverse of $\mathbf{C}$	$\mathbf{D}^{-1}$	inverse of $\mathbf{D}$
$\mathbf{E}^{-1}$	inverse of $\mathbf{E}$	$\mathbf{F}^{-1}$	inverse of $\mathbf{F}$
$\mathbf{G}^{-1}$	inverse of $\mathbf{G}$	$\mathbf{H}^{-1}$	inverse of $\mathbf{H}$
$\mathbf{I}^{-1}$	inverse of $\mathbf{I}$	$\mathbf{J}^{-1}$	inverse of $\mathbf{J}$
$\mathbf{K}^{-1}$	inverse of $\mathbf{K}$	$\mathbf{L}^{-1}$	inverse of $\mathbf{L}$
$\mathbf{M}^{-1}$	inverse of $\mathbf{M}$	$\mathbf{N}^{-1}$	inverse of $\mathbf{N}$
$\mathbf{O}^{-1}$	inverse of $\mathbf{O}$	$\mathbf{P}^{-1}$	inverse of $\mathbf{P}$
$\mathbf{Q}^{-1}$	inverse of $\mathbf{Q}$	$\mathbf{R}^{-1}$	inverse of $\mathbf{R}$
$\mathbf{S}^{-1}$	inverse of $\mathbf{S}$	$\mathbf{T}^{-1}$	inverse of $\mathbf{T}$
$\mathbf{U}^{-1}$	inverse of $\mathbf{U}$	$\mathbf{V}^{-1}$	inverse of $\mathbf{V}$
$\mathbf{W}^{-1}$	inverse of <		

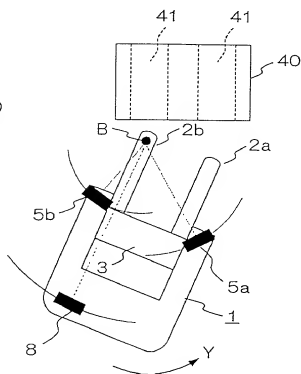
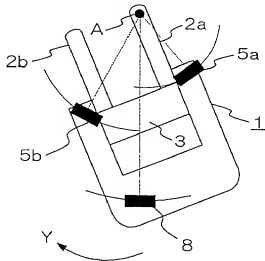
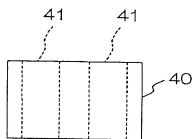
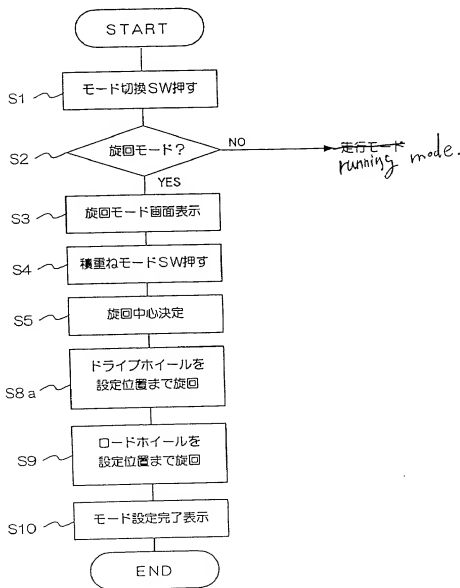


FIG. 28



S1: depress mode switching switch; S2: has turning mode been depressed?; S3: display turning mode screen; S4: stacking mode switch; S5: determine center of turn; S8a: turn driving wheel to set position; S9: turn road wheels to set positions; S10: display mode setting completion screen

FIG. 29A

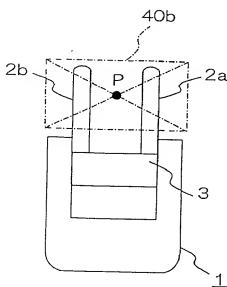


FIG. 29B

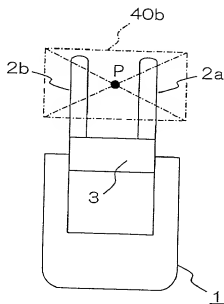
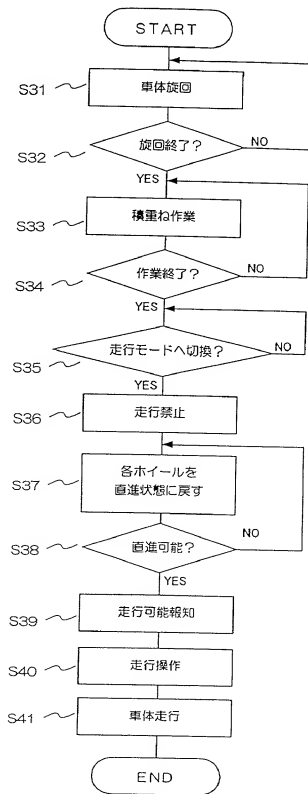




FIG. 30



S31: turn body, S32: has turn been completed, S33: stack pallet, S34: has stacking pallet been completed, S35: has operation mode been switched back to running mode, S36: prohibit running, S38: is straight running possible? S39: inform that running is ready, S40: perform running operation, S41: run body

FIG. 31A

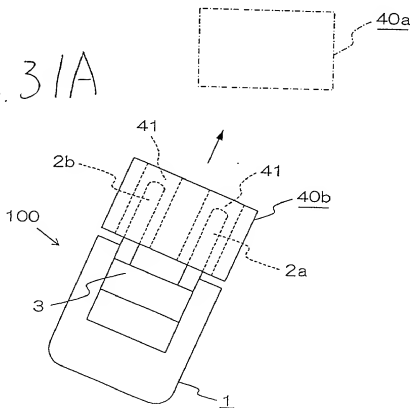


FIG 3/B

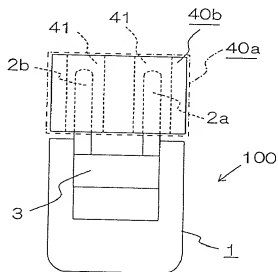
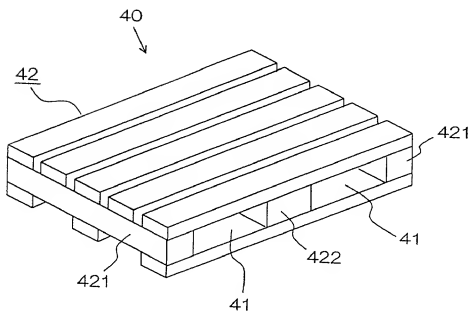


FIG. 32



2003/01/27 14:27:00